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COMPUTERNEWS

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Computer Centre
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Janet Campbell, Editor

TABLE OF CONTENTS

PAGE

Hours of Service During Christmas/New Year´s Break 1
Telenet 2
Review - HSJS Access Control Scheme 2
High School Usage of HSJS 2
SCRIPT Scripts 3
SPEAKEASY Sessions 4
Languages Work Files in TSO 4
PL/I F Libraries moved 4
APL76 Conference Review 5
SIGGRAPH ´77 6
New Physics Computing Co-ordinator 6
Personnel Changes 7
GPJS - Software Usage Statistics 7
HSJS Monthly Statistics 7
S/370-165-II Reliability 9
Interactive Systems Reliability 11
Recent Acquisitions in the Department of Computer Science Library 11
UTCC Computer Equipment 12
UTCC Directory 13

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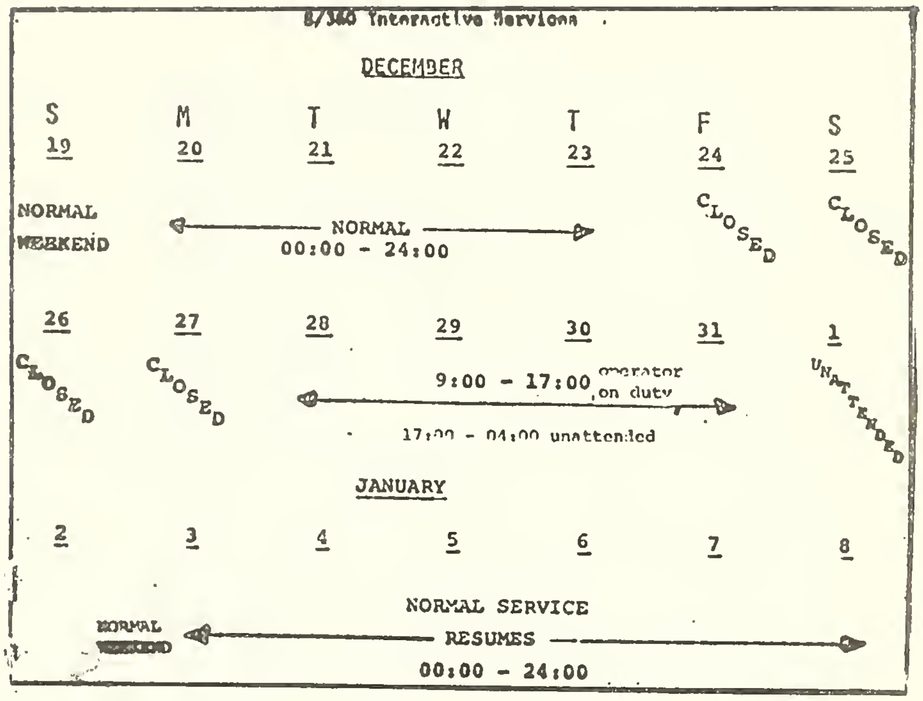
HOURS OF SERVICE DURING CHRISTMAS/NEW YEAR'S BREAK

The University has announced that the Christmas/New Year holiday period will run from Friday, December 24 to Friday, December 31, 1976, inclusive with normal hours of work resuming on Monday, January 3, 1977. UTCC has tentatively planned the following service schedule, bearing in mind the need for service during the intervening week between Christmas and New Year and the general closure of most normal academic and business functions of the University during this period. Please understand that this schedule is tentative only and that modifications may be made if the need arises. By the next newsletter, UTCC should be able to commit itself to a firm schedule; this tentative announcement is primarily for long-range planning purposes.



S/360 Interactive Services

DECEMBER

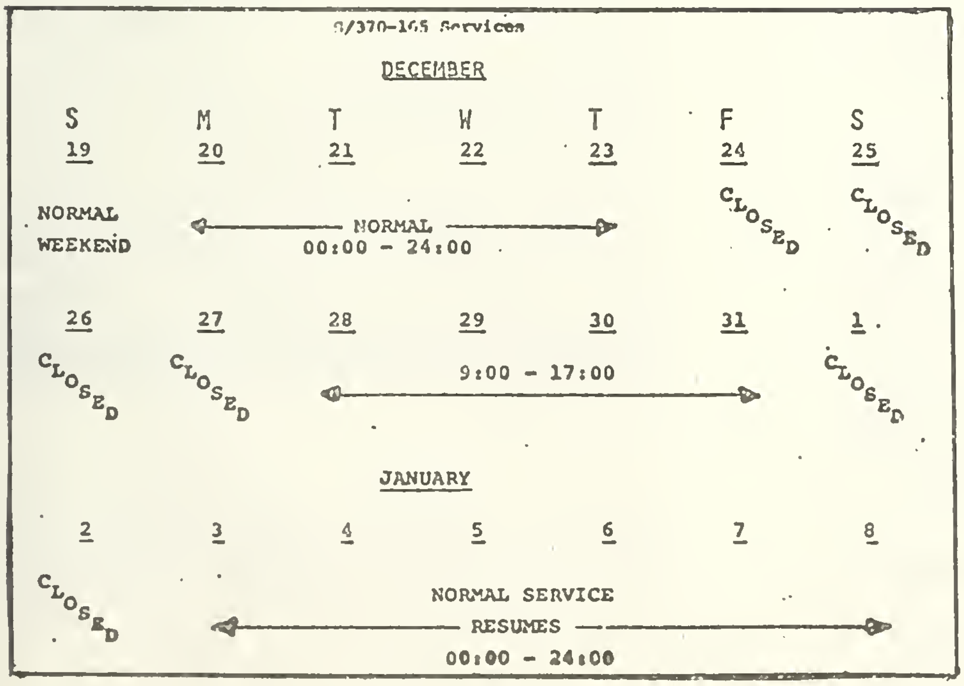
S	M	T	W	T	F	S
19	20	21	22	23	24	25
NORMAL WEEKEND	← NORMAL → 00:00 - 24:00				CLOSED	CLOSED
26	27	28	29	30	31	1
CLOSED	CLOSED	← 9:00 - 17:00 operator on duty → 17:00 - 04:00 unattended				UNATTENDED

JANUARY

2	3	4	5	6	7	8
NORMAL WEEKEND	← NORMAL SERVICE RESUMES → 00:00 - 24:00					

The S/370 Services available during this period include full GPJS, HSJS, TSO and APLSV. The terminal sites covered by this are SFT and EUT. Accessibility from other terminal locations will be announced at each site in advance of the holiday period.

Derry Cox



S/370-165 Services

DECEMBER

S	M	T	W	T	F	S
19	20	21	22	23	24	25
NORMAL WEEKEND	← NORMAL → 00:00 - 24:00				CLOSED	CLOSED
26	27	28	29	30	31	1
CLOSED	CLOSED	← 9:00 - 17:00 →				CLOSED

JANUARY

2	3	4	5	6	7	8
CLOSED	← NORMAL SERVICE RESUMES → 00:00 - 24:00					

TELENET

Recently, one of our users expressed interest in UTCC becoming part of the growing Telenet network.

Essentially, Telenet allows economical data exchange between remote locations. The major reason for acquiring this service would be to allow faculty, staff and students to obtain access to UTCC computers from locations served by the Telenet network. Currently, Toronto, Montreal and Ottawa along with major cities in the United States belong to the Telenet network. Service is also planned for the near future to include Mexico and the United Kingdom.

In Canada, Telenet interconnects with the Trans-Canada Telephone System (TCTS) via the DATAPAC network.

The 110-300 bps computer port interconnected to the DATAPAC/Telenet service has a one-time installation cost of $200 and a monthly charge of $300. There is no additional charge for telephone circuits and modems. Terminal usage is charged to the host computer based upon connection time and the number of packets communicated. The connection charge ranges between $1.40 and $4.80 per hour depending upon the density classification of city. Packet charges will typically be $1.75 per hour for interactive asynchronous terminal use.

In addition, the normal host computer charges will be in effect.

While the monthly charges appear high for one user, departments could share the cost of one port.

Any interested users can contact Stan Yagi, 978-7331 for more information.

Stan Yagi

REVIEW - HSJS ACCESS CONTROL SCHEME

On September 13, 1976, the new High Speed Job Stream (HSJS) Access Control scheme was implemented. (For details see COMPUTERNEWS #138).

Under this scheme, each HSJS user must have either a $ACCT card or a valid S/370 Service Access Code to run an HSJS job.

During the first two weeks, it appeared that users with GPJS Service Access Codes had more problems adjusting to the system than $ACCT card users. During this period, 25% of the jobs run were flushed, however, this number has decreased considerably since then.

The system has been well received. A recent article in the University of Toronto Varsity newspaper indicates that students view the scheme favorably.

During the period of September 13 - September 30, 38,577 jobs were run using $ACCT cards. At the end of September, 14,234 $ACCT cards had been distributed for 150 courses. Of these cards, 22% were used during this period. On average, 12 runs were made per card. The run limits chosen ranged from 3 to 9,999 with an average run limit of 357.

Mark Tapia

HIGH SCHOOL USAGE OF HSJS

In previous years UTCC has allowed high school students to use the HSJS in order to acquaint themselves with computing. UTCC will continue this policy under the HSAC System.

cont'd....

HIGH SCHOOL USAGE cont´d

A high school principal may make a written request for up to 300 HSJS runs per term for his high school. Requests should be directed to:

Don Gibson
Computer Centre
Room 128
Sandford Fleming Bldg.
10 King´s College Road
University of Toronto
Toronto, Ontario
M5S 1A1

Additional use of the HSJS may be obtained by establishing an account through the Administration Office of the Computer Centre, SF139. Minimum accounts are $300, non-refundable. Over 300 runs, the rate per job is 40¢.

Don Gibson

SCRIPT SCRIPTS

Tables of Contents

As announced in last month´s COMPUTERNEWS, there is now a "public library" for useful SCRIPT ´imbed´ files. This article discusses a set of imbeds for preparing tables of contents. This file was, in fact, used in USERBOOK module 3.3NSCRIPT. The advantage of preparing a table of contents by this method is that any changes made to the source document will automatically be reflected in the table of contents. The table of contents never has to be typed in or updated. The TWOPASS option must be used.

Three control statements must appear near the start of the file. The statement

```
.im  tcrefs
```

includes most of the commands needed to build the table. The user must provide a line of the form

```
.tb  ./60
```

which states that the period (´.´) will be used to fill in (or ´leader´) over to column 60, where the actual page numbers will print. Finally, the line

```
.im tchere
```

will cause the table of contents to appear wherever it appears in the file.

All titles and subtitles must be of the form

```
.$tc1    TITLE
.$tc2    SUBTITLE1
  text
.$tc2    SUBTITLE2
  text
```

Note that .$tc1 and .$tc2 are ´control words´ generated by the .im tcrefs. If any special characters appear on the title or subtitle lines, they must be enclosed in single quotes, e.g.

```
.$tc1  ´3.0´  Syntax of Commands
```

This script is a model; users may edit it and prepare their own versions. To get a listing of what is available in the public library, run

```
ns  ´appl.script.syslib(contents)´-
      lib(´appl.script.syslib´)
```

or

```
// EXEC SCRIPT,
// DSN=´APPL.SCRIPT.SYSLIB(CONTENTS)´
```

A Problem with TSO

Several SCRIPT users on TSO have reported that footing or heading lines have been chopped in two when printed at the terminal. This is due to the new SCRIPT processor which sometimes puts out more than one line on a single call to the TSO output routines("TPUT"). To bypass the problem, which does not affect offline or batch runs, enter the TSO command

```
TERM  LINESIZE(255)
```

before invoking SCRIPT.

Please report further problems to Ian Darwin at 978-7318, 49 St. George, Room 303.

Ian Darwin

SPEAKEASY SESSIONS

The MU level of SPEAKEASY has arrived and has been installed. Some highlights of MU are the new LINK facility which keeps track of functions loaded from different libraries, improved PRINT and TABULATE including the ability to specify a print format (PRINTSPEC) for each variable, logical SET operations, and enhanced error control.

Users interested in trying out this test release of SPEAKEASY MU are invited to contact Ian Darwin at 978-7318 or at 49 St George, room 303.

Ian Darwin

LANGUAGES WORK FILES IN TSO

Temporary work files SYSUT2 and SYSUT3 will no longer be preallocated during LOGON, effective November 30, 1976.

The ASM and PLIC commands for accessing ASSEMBLER G and PL/I CHECKOUT will automatically allocate these work files when necessary. This means that users of ASM and PLIC may have to wait longer for a response from ASM and PLIC. As the temporary work file SYSUT1 will still be preallocated at LOGON time, other language prompters like PLI and LINK, will not be affected by this change.

For users accessing language processors without prompters, the work files SYSUT2 and SYSUT3 will have to be explicitly allocated when necessary by the users in some form like

```
ALLOCATE FILE(SYSUT2) NEW -
SPACE(15,3) BLOCK(4096)
```

before a CALL to a processor. The following table summarizes when the work files are needed.

LANGUAGE PROCESSORS	SYSUT2	SYSUT3
PL/I CHECKOUT	only with MACRO option	Not Applicable
ASSEMBLER	YES	YES
FORTRAN H-EXTENDED	Only with XREF option	Not Applicable
COBOL	YES	YES

Any comments, questions or problems should be directed to Kin Fong at 978-4924.

Kin Fong

PL/I F LIBRARIES MOVED

Users are reminded that the PL/I F compiler and subroutine libraries have been in SYS1.PLILINK and SYSI.PLILIB since July 7, 1976.

The compiler and execution time library SYS1.PLILINK should be explicitly referred to in the compilation and execution or loadgo steps in the form of

```
//stepname.STEPLIB DD DSN=SYS1.PLILINK,
// DISP=SHR
```

The subroutine library SYS1.PLILIB should be explicitly referred to in the linkedit or loadgo step in the form of

```
//stepname.SYSLIB DD DSN=SYS1.PLILIB,
// DISP=SHR
```

Effective November 15, 1976, PL/I F jobs (including existing compiled and/or linkedited programs) not using IBM or UTCC catalogued procedures for PL/I and without explicit references to the PL/I F private libraries as indicated above, will fail.

Please direct any questions or problems to Kin Fong at 978-4924.

Kin Fong

APL76 CONFERENCE REVIEW

The tenth in a series of international APL conferences was held in Ottawa, September 22-24, 1976.

The conference was attended by over 600 representatives from computing centres all over the world. The complete CONFERENCE PROCEEDINGS are available at the UTCC Information Office, SF128.

The conference included candid discussions and papers that examined the design and implementation of programs and systems of programs to collect and process data and present meaningful information to businessmen, economists and others involved in decision making processes.

Several papers caught my attention. They are as follows:

M.Elliot, ´An APL Keyed File System´. Decribes a tree-structured file subsystem extensively used at Massey-Ferguson. The system is supervisory to the SHARP APL file primitive. The advantage of using keyed files is in the efficiency of updating and retrieval to several refinement levels, uniformity in the file structures used at Massey-Ferguson and independence of the continuous sequential nature of SHARP APL files. See also the STSC Manual on EMMA, Extended Management Macros in APL, available from the Scientific Time Sharing Corporation.

R.Hurtubise, C.Grenier, et al, ´The Design, Development and Operation of an APL-Based MIS: The Case of a Small Firm´. Reveals the intractability of business management with respect to computer access. See also, A. Guthrie, ´Interactive Computing and the Manager-Machine Interface´.

P.Berry, ´Distributive Rounding in Commercial Applications´. How to assure "cross-footing" in double entry bookkeeping. Really fascinating!

A.Falkoff, ´Some Implications of Shared Variables´. BURROUGHS, DEC, XEROX and HEWLETT-PACKARD support APL implementations in which each APL user is really just another job to the machine supervisor programs. File I/O is thus an intrinsic capability, somewhat like a FORTRAN read/write statement. IBM APLSV, however, takes an entirely different approach. Each APL user is monitored by the APL supervisor alone and access to external storage or other machine resources, is achieved by means of data variables reserved for shared use with an Auxiliary Processor. This is a far-reaching idea and remains the industry standard, despite the failure of other manufacturers to follow suit. The appeal for me is that modifications to the host system that are external to APL may be realized by modifications to the Auxiliary Processor alone, acting essentially as a channel program.

K.Spielberg and F.Schober, ´APL Econometric Planning Language(EPLAN)´ and J.Prins, ´APL Forecasting System´. Present some interesting, specialized APL systems for scientific forecasting. These programs are available from IBM as User Installed Programs.

R.Eggensperger and S.Witting,´APL and Computer Assisted Instruction-A Critical Laudation, APL Programs for the Simulation of Stochastic Processes in Science Teaching´. An excellent graphic presentation of hands-on experience with the evolution of stochastic processes.

Many papers dealt with the organization and re-organization of the APL public libraries and the problems of APL workspace documentation. The new SHARP APL CATALOG developed on UTCC´s system and the automatic WSLISTERS available in 4 WSL are very advanced. However we did pick up a few ideas that will be of use when our APL PRINT TRAIN arrives.

cont´d....

APL76 CONFERENCE cont'd

In the area of hardware, far more sophisticated terminals at not too unreasonable prices, and a new, small 180 line/minute line printer designed for office use and marketed by the Lanpar Corporation were featured. In addition, the IBM 3270 Display Station(terminal), the serial I/O hardware interface for the IBM 5100 APL/BASIC mini-computer and the relatively new Hewlett-Packard 2641A APL/ASCII terminal, offer enormous gains over tele-typewriters in the ability to present a human interface to time-sharing systems.

Ernst Goetze

SIGGRAPH '77

The fourth Annual Conference on Computer Graphics and Interactive Techniques will be held July 20 - 22nd, 1977 at the San Jose Hyatt House in San Jose, California. The conference is sponsored jointly by ACM/SIGGRAPH.

SIGGRAPH '77 will focus on research, applications and education in computer graphics and interactive techniques. Papers are solicited on a variety of topics, including graphical theory and techniques such as languages, hardware, software, tools, portability, standards, device independence, line graphics, raster graphics, data structures, satellite systems, human factors; applications in the area of environmental, urban, transportation, cartography, biomedicine, animation, computer aided design, art, music, business, statistics, recreational graphics, decision making, and computer graphics education. Papers may report original work, unusual or unique applications or techniques of computer graphics, or they may evaluate graphical specifics.

You are invited to submit a paper to the program chairman:

James E. George
Los Alamos Scientific Laboratory
P.O. Box 1663, MS 272
Los Alamos, New Mexico 87545

A short abstract is requested by December 1, 1976 and the final paper must be submitted by May 2nd, 1977.

The General Chairman is Stephen Levine, Lawrence Livermore Laboratory, P.O. Box 808, Livermore, CA 94550. He can be reached for further information at 415 - 447-1100, Ext. 3360.

NEW PHYSICS COMPUTING CO-ORDINATOR

I am pleased to announce the appointment of Bob Chambers as the Computing Co-ordinator at the New Physics terminal.

Bob has a Ph.D. degree in Astronomy from U. of T. and during the course of his studies has been a frequent user of the Physics terminal. He is no doubt known by a number of users and brings to his new position a user's point of view.

Bob's interest in computing stems from his research in areas of theoretical astrophysics. He has considerable experience in the use of numerical methods including the solution of differential equations by finite difference techniques, extrapolation and interpolation, and matrix manipulation. Bob's other computing interests include data storage and manipulation, interactive systems, and graphical methods.

Anyone having any questions regarding the New Physics terminal may contact Bob in Room 1201 at McLennan Labs, 978-8823.

Ralph Lombardi

PERSONNEL CHANGES

Leaving the Centre this month are Dave Scobie, Administration Manager and Doug Greer, Information Systems, 215 Huron Street. Dave will be going to a job in industry.

New at the Centre this month is Bob Chambers who has taken over the Computing Coordinator duties at the New Physics Terminal. Returning to work at the Centre as Sean Keeley's secretary is Lynne Jenkins. Welcome back, Lynne!

Congratulations are extended to Shrigobin Misir who has been promoted to Console Operator; to Reiner Paessler who has been promoted to Peripheral Operator and to Carl Williams who has been promoted to Ancillary Operator.

Best of luck to all of you in your new positions.

June Bridges

GPJS - SOFTWARE USAGE STATISTICS

The following chart summarizes the software usage per classified procedure and program name for the General Purpose Job Stream from September 1 to October 4, 1976.

SOFTWARE	USES (#JOBSTEPS)	(%)
ALGOL	32	0
APLSV	21	0
ASM	706	2
ATSUTIL	3	0
COBOL	337	1
CSMP	29	0
DATATEXT	170	0
DBUGUTIL	26	0
DISKUTIL	1,681	6
DSUTIL	3,979	15
FORMAC	10	0
FORTRAN	7,428	28
GPSS	349	1
GRAPHICS	1,789	6
JCLUTIL	115	0
LISP	29	0
MARKEXAM	31	0
MARKIV	814	3
MPS/MPSX	178	0
OSUTIL	218	0
PAPERTAP	128	0
PL/I	1,742	6
RPG	55	0
SAS	120	0
SERVAID	287	1
SNOBOL	680	2
SORTMERG	1,511	5
SPEAKEZ	15	0
SPSS	1,825	7
SSP/BMDD	562	2
TAPEUTIL	410	1
TIPRS	100	0
TSO	50	0
WYLBUR	8	0
XFR	333	1
TOTAL	25,771	

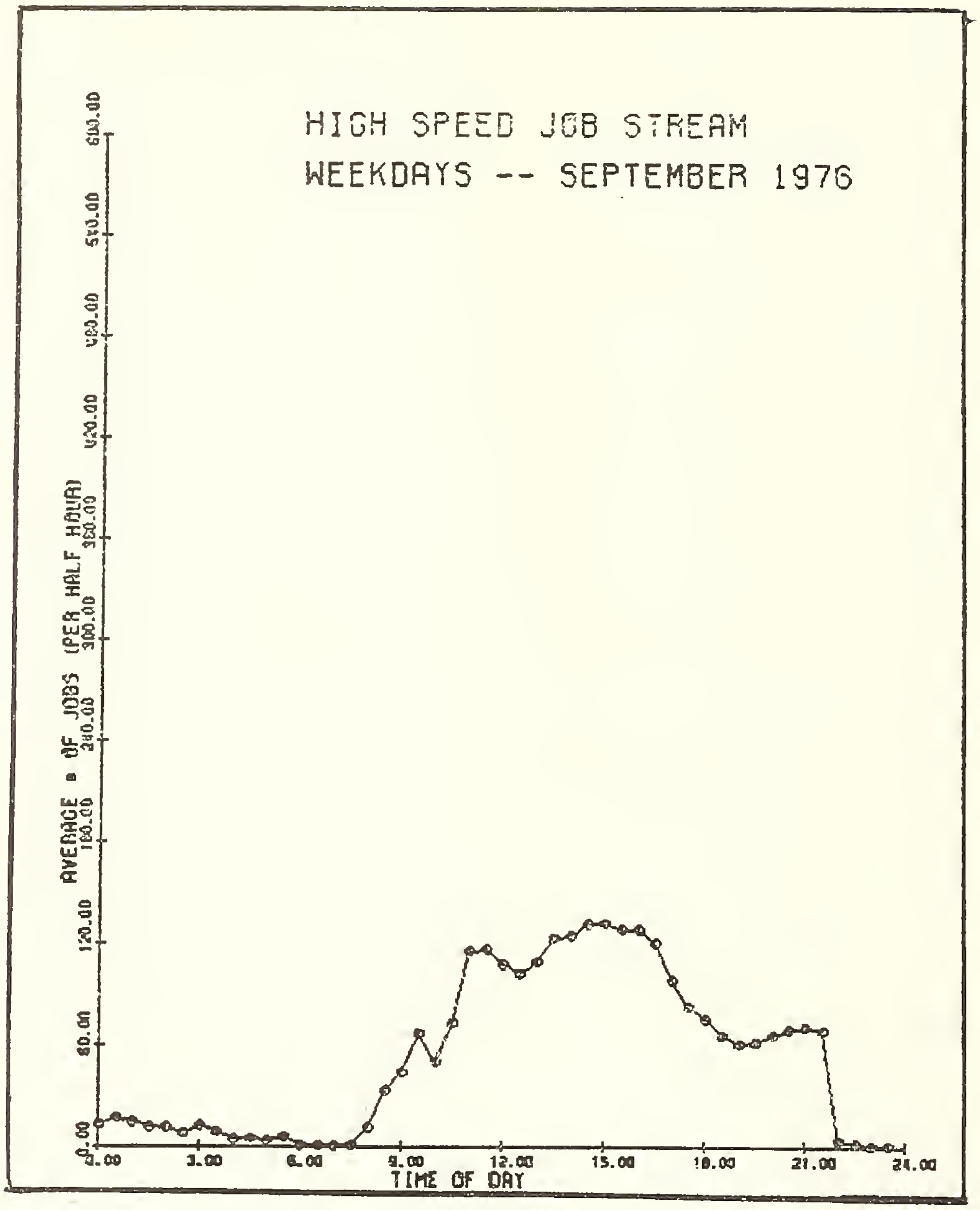
Kin Fong

HSJS MONTHLY STATISTICS

During the month of September, 1976, 66,160 jobs were processed compared with 122,215 jobs for the previous year, a decrease of 45.9%.

The following charts summarize the HSJS activity for the month of September. The graph represents the average number of jobs processed during each half hour period of the day.

Mark Tapia



RESOURCE USAGE BY PROCESSOR

			TOTAL PER PROCESSOR			AVERAGE PER USE		
PROCESSOR	#USES	%TOTAL	CPU (MIN)	#CARDS READ	#LINES PRINTED	CPU (MIN)	#CARDS READ	#LINES PRINTED
WATFIV	27139	(44)	409.72	5263284	5184226	0.012	192	188
PL/C	15146	(24)	114.90	965621	1989225	0.004	60	128
SP/K	12516	(20)	42.82	337128	780392	0.000	24	60
UTILITY	3038	(5)	6.83	470407	579409	0.000	152	188
ASMG	1544	(2)	33.73	334644	535597	0.020	216	344
SPSSQ	1096	(2)	17.28	109658	184118	0.016	100	164
SPITBOL	601	(1)	9.25	108817	134577	0.012	180	220
WATBOL	330	(1)	4.18	91901	88068	0.012	276	264
LISP	127	(0)	0.86	9588	22369	0.004	72	176
UTILITY	115	(0)	0.14	10193	11264	0.000	88	96
$	114	(0)	0.41	4625	5181	0.000	40	44
ALGOLW	96	(0)	0.71	19999	19449	0.004	208	200
SNAP	63	(0)	0.62	2069	9804	0.008	32	152
PLUTO	36	(0)	0.17	2701	3913	0.004	72	108
ASSIST	8	(0)	0.02	781	971	0.000	96	120
SIMON	6	(0)	0.00	90	212	0.000	12	32
SP/KM	1	(0)	0.00	3	12	0.000	0	12
UTILITY	0	(0)	0.00	0	0	0.000	0	0
TOTAL	61976		641.64	7731509	9548787	0.010	124	154

S/370-165-II RELIABILITY

The reliability statistics for September indicate an uptime percentage of 98.4 while the average number of unscheduled IPL's per day reached 0.86. The number of scheduled hours of production for September totalled 484.

MONTHLY COMPARATIVE FIGURES

MONTH	% UPTIME	UNSCHED. IPLs/DAY
Jan/75	95.7	2.77
Feb/75	96.0	1.14
Mar/75	96.7	1.10
Apr/75	98.6	0.70
May/75	99.4	0.60
Jun/75	97.4	0.79
Jul/75	95.2	1.23
Aug/75	97.6	0.83
Sep/75	99.1	0.87
Oct/75	97.2	1.13
Nov/75	95.8	1.63
Dec/75	99.4	0.48
Jan/76	99.1	0.43
Feb/76	98.9	0.97
Mar/76	96.8	1.03
Apr/76	99.3	0.52
May/76	98.8	0.67
Jun/76	96.5	0.97
Jul/76	96.4	0.72
Aug/76	99.4	0.47
Sep/76	98.4	0.86

The percentage breakdown for total system downtime for September was:

HARDWARE: 302 minutes (63.3%)
SOFTWARE: 149 minutes (31.2%)
OTHER : 26 minutes (05.5%)

The major events contributing to these downtime totals were as follows:

Sept. 10 - 43 minutes down - 1 IPL

a. All time attributed to DATA CHECKS on the spool volume which resulted in a series of "HASP catastrophic errors". A "cold format" of the spool volume was required to remove the bad data.

Sept. 20 - 45 minutes down - 6 IPL's

a. 35 minutes charged to a number of user jobs causing HASP catastrophic errors. A HASP format was again performed to remove the bad data.
b. 10 minutes due to a "machine error" which dropped the system into an A05 wait.

Sept. 21 - 74 minutes down - 8 IPL's

a. 35 minutes resulted from extended ITEL maintenance on the 7330 disk modules.
b. 5 minutes to install an HSJS ZAP.
c. 34 minutes due to a user job which contained invalid JCL causing supervisor loops during "executor" initialization.

Sept. 28 - 150 minutes down - 1 IPL

a. All time attributed to a bad "select generator" card in the /165 ITEL memory. It was necessary to order a new card from California which resulted in the system being run with only three megabytes of memory online for a period of 72 hours.

Sept. 29 - 110 minutes - 3 IPL's

a. All time charged to recurring problems in the ITEL memory. ITEL engineers could find no definite source of the errors and the problem disappeared after diagnostics were run.

Paul Scarborough

```
                    DOWNTIME_REPORT_ON___S/370__FOR_SEP_76

----------------------------------------------------------------------------------------------------------------------------
|                                                     REIPLS(FREQ) // DOWNTIME (MN)                                        |
| DAY  REIPL   DNTIME 0    5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   85   90   95  100|
======================+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
| W  1     0       0  |                                                                                                    |
| T  2     0       0  |                                                                                                    |
| F  3     0       0  |                                                                                                    |
| S  4     0       0  |                                                                                                    |
| S  5     0       0  |                                                                                                    |
| M  6 (CENTER CLOSED)|                                                                                                    |
| T  7     0       0  |                                                                                                    |
| W  8     0       0  |                                                                                                    |
| T  9     1       7  |☒******                                                                                            |
| F 10     1      43  |☒******************************************                                                          |
| S 11     0       0  |                                                                                                    |
| S 12     1      10  |☒*********                                                                                         |
| M 13     0       0  |                                                                                                    |
| T 14     0       0  |                                                                                                    |
| W 15     1       5  |☒****                                                                                              |
| T 16     0       0  |                                                                                                    |
| F 17     0       0  |                                                                                                    |
| S 18     1       8  |☒*******                                                                                           |
| S 19     0       0  |                                                                                                    |
| M 20     6      45  |☒☒☒☒☒☒***************************************                                                       |
| T 21     8      74  |☒☒☒☒☒☒☒☒******************************************************************                          |
| W 22     2      19  |☒☒*****************                                                                                 |
| T 23     0       6  |******                                                                                              |
| F 24     0       0  |                                                                                                    |
| S 25     0       0  |                                                                                                    |
| S 26     0       0  |                                                                                                    |
| M 27     0       0  |                                                                                                    |
| T 28     1     150  |☒*********************************************************************************************** 150 |
| W 29     3     110  |☒☒☒********************************************************************************************* 110 |
| T 30     0       0  |                                                                                                    |
----------------------------------------------------------------------------------------------------------------------------

LEGEND      : ONE □  =ONE UNSCHED. IPL
              ONE *  =ONE MINUTE OF DOWNTIME

                  TOTAL SCHEDULED HOURS OF PRODUCTION :  484
                  TOTAL DOWNTIME (MN)   :  477 , AVG/DAY :  16.45 , AVG/PROD HOUR :   0.48
                  TOTAL UNSCHED. IPL'S :   25 , AVG/DAY  :   0.86
                  DOWNTIME RATE IS     :  1.64 PERCENT OF SCHEDULED PRODUCTION HOURS
```

INTERACTIVE SYSTEMS RELIABILITY

The uptimes achieved for the month of September for each of APL and ATS were 100% of scheduled operation. Previously, Interactive Services have come close to achieving similar performance but this is the first month in which no downtime was experienced.

The total number of scheduled hours of operation during the month of September totalled 471 and there were no unscheduled IPL´s. In addition, Interactive Services were also available for approximately 125 hours of unattended weekend operation.

This month´s performance will be hard to repeat but we will certainly strive to keep up our excellent reliability.

Kam Jain

RECENT ACQUISITIONS IN THE DEPARTMENT OF COMPUTER SCIENCE LIBRARY

Advances in Computers.
vol. 14, 1976.

Clinic on Library Applications of Data Processing, University of Illinois.
Proceedings, 1975.

CODASYL Systems Committee.
Selection and Acquisition of Data Base Management Systems.
New York, ACM, Mar. 1976.

Eliason, A.L. and Kitts, K.D.
Business Computer Systems and Applications.
Chicago, Science Research Assoc., 1974.

IFIP Working Group on 2.1 ALGOL
New Directions in Algorithmic Languages 1975, ed. by S.A. Schuman.
Rocquencourt, France, I.R.I.A., 1976.

International Symposium on Computing Methods in Applied Sciences and Engineering, Versailles, Dec. 1973.
Computing Methods in Applied Sciences and Engineering, ed. by R. Glowinski and J. L. Lions.
Berlin, Springer-Verlag, 1974.
2 vols.

Murach, Mike.
Standard COBOL.
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UTCC COMPUTER EQUIPMENT

SYSTEM/370 MODEL 165-II

- located in SF103/105/112
- provides General Purpose Job Stream, High Speed Job Stream, APL SV and TSO services
- 4 megabytes of memory
- 1 drum (2301)
- 16 disk drives (3330)
- 9 disk drives (2314)
- 6 magnetic tape drives (4 9-track and 2 7-track)
- 6 display consoles
- 6 printers
- 5 card readers
- 1 card punch
- 8 remote batch terminals
- 1 paper tape reader
- Calcomp plotters (11" and 30")
- Gould plotter (11")
- OS/MVT with HASP

SYSTEM/360 MODEL 65

- located in McLennan Physical Laboratories
- provides APL and ATS services
- 1536K bytes of core
- 26 disk drives (2314)
- 3 9-track magnetic tape drives
- 1 printer
- 1 card reader
- 1 card punch
- 140 typewriter terminals
- OS/MVT with APL and ATS

COMPUTER RESEARCH FACILITY

- located in SF207
- DEC GT44 Systems with
  - 1 PDP-11/40 CPU
  - 2 9-track dual density tape drives
  - 1 1000 cpm card reader
  - VT17 graphics display unit
  - 1 lab. peripheral system with A/D & D/A
  - 1 CVI 260 Video Bandwidth Compressor
- DEC GT40 System with
  - 1 PDP-11/10 CPU
  - 1 2314 tape disk drive
  - 1 VT12 graphic display unit
  - 9-track/800 BPI tape drive
  - 1 Calcomp microfilm plotter

UTCC DIRECTORY

	ROOM	PHONE 978-
ASSOCIATE DIRECTOR.		
Al Heyworth	SF214C	4936
ADMINISTRATION MANAGER		
Dave Scobie	SF143	8948
INFORMATION OFFICE		
General Inquiries	SF128	4990 or 4991
Don Gibson	SF128A	5568
MANAGER, SERVICES		
Stan Yagi	SG200	7331
MANAGER, MARKETING AND PROGRAMMING SERVICES		
Dave Scobie	SF143	8948
COMPUTING CO-ORDINATORS		
Sandford Fleming Terminal		
Mark Tapia	SF125	7109
Program Advisors	SF117	8599
Erindale		
Clem DiPlacido		828-5311
Scarborough		
Martin Hubel		284-3173
Arts and Science		
Dave Tritchler	SS2104	6509
New Physics		
John Roth	NP1202	8823
SUPERVISOR, APPLICATIONS SUPPORT		
Herb Kugel	SG304	7286
MANAGER, OPERATIONS		
Derry Cox	SF113	7092
SUPERVISORS, OPERATIONS		
Paul Scarborough (S/370-165-II)	SF114	6220
Kam Jain (S/360-65)	NP333	7374
Dave Wong (S/370-155)		6864
MANAGER, SYSTEMS		
Rein Mikkor	SF116	5058
SYSTEM HARDWARE SUPERVISOR		
Eugene Siciunas	SF113	4967
MANAGER, COMPUTER RESEARCH FACILITY		
Dennis Smith	SF214B	4800
LAB CO-ORDINATOR (CRF)		
Krishna Patnaik	SF207	4086
ACCOUNTS		
Ann DeFazio	SF139	7148
Wynona Bardgett	SF139	8702
ACCESS CODES		
Yvonne Bowen	SF139	8703
ASSISTANT MANAGER, INFORMATION SYSTEMS TERMINAL		
George Milo		5040

NOTE:

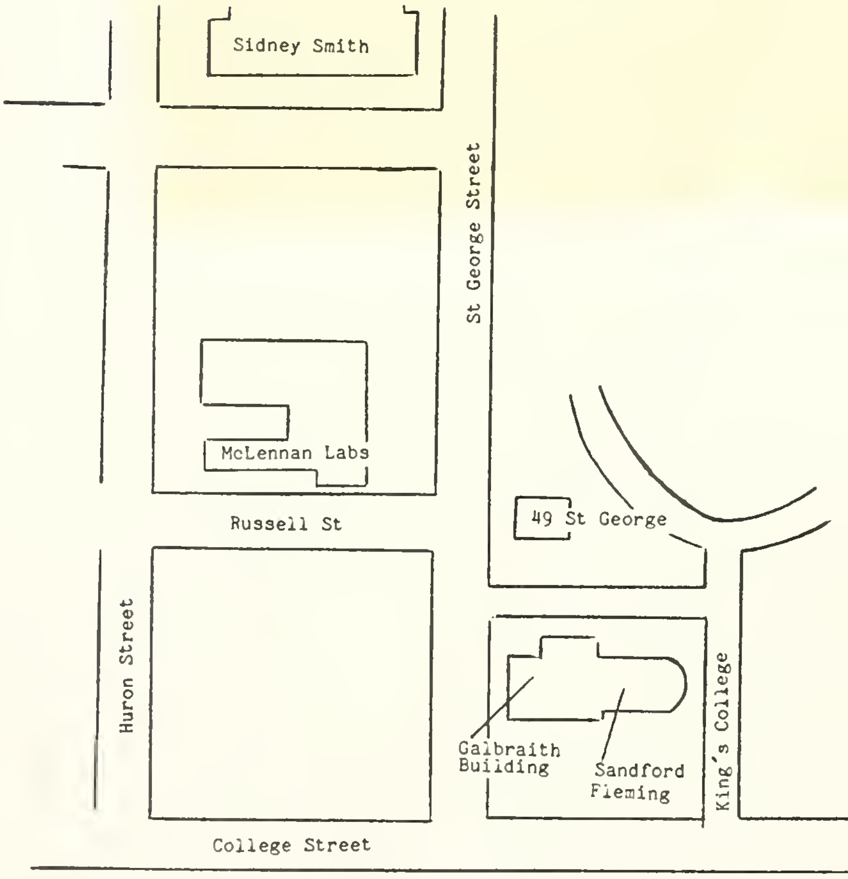
SF = Sandford Fleming
SG = 49 St. George
NP = McLennan Physical (New Physics)
SS = Sydney Smith

JOB AND SYSTEM STATUS QUERIES

SYSTEM/370, TSO	7373
ATS/APL	6234
2741 TERMINAL MALFUNCTIONS	7107
029 KEYPUNCH MALFUNCTIONS	6465

SERVICES

	DIAL-UP	ADVICE
APL - 2741	7200	6710
APL(ASCII)	7200	6710
APL SV - 2741	7239	6710
APL SV - TTY	7447	6710
ATS	7100	7107
TSO - 2741	7303	8599
TSO - TTY (10 cps)	7390	8599
TSO - TTY (30 cps)	7386	8599
DATATALK	6710	6710



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